

Change Order No. 2

Date of Issuance: _____ Effective Date: _____

Project: Digester Renovation with Alternate Power Sources Project	Owner: City of West Lafayette, Indiana	Owner's Contract No.: SRF No. WW CS182400 02
Contract: N/A		Date of Contract: September 11, 2007
Contractor: Bowen Engineering Corporation		Engineer's Project No.: 95204.06

The Contract Documents are modified as follows upon execution of this Change Order:

Description: **See Attachment A**

Attachments: (List documents supporting change): **Attachment A**

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price:	Original Contract Times: <input type="checkbox"/> Working days XX Calendar days
\$ 8,244,000.00	Substantial completion (days or date): 510 days (February 8, 2009)
	Ready for final payment (days or date): 540 days (March 10, 2009)
Increase from previously approved Change Order No. 1:	Increase from previously approved Change Orders:
\$ 27,400.00	Substantial completion (days): 58 days
	Ready for final payment (days): 58 days
Contract Price prior to this Change Order:	Contract Times prior to this Change Order:
\$ 8,271,400.00	Substantial completion (days or date): 568 days
	Ready for final payment (days or date): 598 days
Increase of this Change Order:	Increase of this Change Order:
\$ 106,680.00	Substantial completion (days or date): 24 days
	Ready for final payment (days or date): 24 days
Contract Price incorporating this Change Order:	Contract Times with all approved Change Orders:
\$ 8,378,080.00	Substantial completion (days or date): 592 days (May 1, 2009)
	Ready for final payment (days or date): 622 days (May 31, 2009)

RECOMMENDED:

By: _____

Engineer (Authorized Signature)

Date: 7/15/09

M. D. Wessler & Associates, Inc.

ACCEPTED:

By: _____

Date: _____

City of West Lafayette, Indiana
Board of Public Works & Safety

ATTEST:

By: _____

Clerk-Treasurer

ACCEPTED:

By: _____

Contractor (Authorized Signature)

Date: 7/9/09

Bowen Engineering Corporation

ATTACHMENT A

DESCRIPTION, PURPOSE & JUSTIFICATION CHANGE ORDER NO. 2

WESSLER PROJECT No. 95204.06

PROJECT: **Digester Renovation With Alternate Power Sources Project**

OWNER: **City of West Lafayette, Indiana**

CONTRACTOR: **Bowen Engineering Corporation (BEC)**

<u>DESCRIPTION, PURPOSE & JUSTIFICATION OF CHANGE</u>	<u>ADD</u>	<u>DEDUCT</u>
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Item No. 1 – Addition Bollards, Valve Box, & MH12 Modifications

Attached Correspondence:

BEC PCO #055

FTM No. 163

\$2,930.00

Additional bollards were required to protect the new gas line shutoff valve at the New Digester Control Building, an additional valve box and cover to protect the gas line tracer wire located within the newly paved area near the new truck scale, and piping changes and modifications to MH12 were made due to a conflict with an existing electrical duct bank.

Item No. 2 – 2" Plant Water to Gas Handling Room

Attached Correspondence:

BEC PCO #058-Revised

FTM No. 149;164

\$4,350.00

The plant water line was extended to through the Gas Handling Room and increased in size to provide an adequate water supply to the new 2" water hydrant which was relocated outside the room to provide for better access and ability to drain when not in use.

Item No. 3 – Enclose Opening Above Door 12

Attached Correspondence:

BEC PCO #059

FTM No. 159; 165

\$1,960.00

Additional work was required to enclose the opening above Door 12 to the MCC Room with drywall construction.

DESCRIPTION, PURPOSE & JUSTIFICATION OF CHANGEADDDEDUCTItem No. 4 – Additional Combustible Gas Monitoring DetectorsAttached Correspondence:

BEC PCO #044 – Secondary Revision
FTM No. 113; 146; 168

\$13,520.00

Additional combustible gas monitoring detectors at various locations in the New Digester Control Building were required and involved additional conduit, wire, and programming revisions.

Item No. 5 – Bowen Use of City Vector TruckAttached Correspondence:

BEC PCO #011
FTM No. 189

\$1,860.00

The Contractor offered a deduct for the use of the City's vector truck as needed at various times throughout construction.

Item No. 6 – Permanent Site Lighting ModificationsAttached Correspondence:

BEC PCO #051
FTM No. 51; 128; 138; 172

\$15,270.00

Installation of permanent site lighting at various locations within the plant site was needed to replace the previously existing site lighting which was located within the area of the new facilities and removed during construction.

Item No. 7 – New Site Lighting ControlsAttached Correspondence:

BEC PCO #051A
FTM No. 51; 128; 138; 172

\$5,540.00

The site lighting control panel was relocated from the Administration Building to the New Digester Control Building MCC Room to allow for better accessibility.

DESCRIPTION, PURPOSE & JUSTIFICATION OF CHANGEADDDEDUCTItem No. 8 – Screenings Washer Electrical Connectors & E-stopAttached Correspondence:

BEC PCO #038; #053-Revised

\$9,250.00

FTM No. 93; 140; 197

The existing electrical connectors for the Screenings Washer cables were replaced with new connectors properly rated for the classified environment of the Screenings Room, and an Emergency Stop Switch installed for the new Screenings Washer.

Item No. 9 – Hot Water System ModificationsAttached Correspondence:

BEC PCO #061

\$13,950.00

FTM No. 157; 158; 161; 162; 183

Modulating actuators were determined necessary and added to several 3-way valves on the hot water loop, and controls and instrumentation revisions were made for proper control, operation, and monitoring of the hot water system.

Item No. 10 – Desk-Top PC, Delete Fiber ConnectorsAttached Correspondence:

BEC PCO #063; #064

\$0.00

FTM No. 171

A Desk-Top PC was provided in the Blower Building Control Room in lieu of a panel-mounted PC at no additional cost.

Item No. 11 – Mounting of Pakscan UnitAttached Correspondence:

BEC PCO #065

\$1,810.00

FTM No. 175; 184

The Pakscan unit for controlling the Primary Clarifier valves was too large to fit in an existing panel enclosure and required a new panel enclosure to be installed.

<u>DESCRIPTION, PURPOSE & JUSTIFICATION OF CHANGE</u>	<u>ADD</u>	<u>DEDUCT</u>
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Item No. 12 – Additional Lighting for Gas Handling Room

Attached Correspondence:

BEC PCO #69-Revised

\$1,380.00

FTM No. 181; 185

An additional lighting fixture was required at the top of the stairwell to the Gas Handling Room to provide better lighting in the area.

Item No. 13 – Added Programming for ST Pumps

Attached Correspondence:

BEC PCO #75

\$600.00

FTMs No. 186; 190

The controls description and SCADA display information for the Sludge Transfer Pumps was revised to provide automated pumping of the digested sludge.

1 day

Item No. 14 – Waste Gas Burner Electrical Service

Attached Correspondence:

BEC PCO #62

\$11,180.00

FTMs No. 170; 191

Additional conduit and wiring was required to provide electrical service from the New Digester Control Building to the new waste gas burner.

Item No. 15 – Addition of Door Closures

Attached Correspondence:

BEC PCO #73

\$1,010.00

FTM No. 192

Door closures were added to several doors in new Digester Control Building.

Item No. 16 – Modify Condensate Holding Tank

Attached Correspondence:

BEC PCO #71

\$710.00

FTMs No. 193

The condensate holding tank and drain piping in the Gas Handling Room was modified to prevent the condensate drains from standing full of water.

<u>DESCRIPTION, PURPOSE & JUSTIFICATION OF CHANGE</u>	<u>ADD</u>	<u>DEDUCT</u>
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Item No. 17 – Relocate Gas Flow Meter in Digester Control Building

Attached Correspondence:

BEC PCO #74
FTM No. 194

\$1,670.00 ---

The gas flow meter for the gas skid was relocated inside the Digester Control Building due to the area around the gas skid being a classified environment.

Item No. 18 – Additional Paving at Truck Scale due to Existing Thin Asphalt

Attached Correspondence:

BEC PCO #60
FTM No. 196

\$1,200.00 ---

During paving activities an area of existing pavement near the new truck scale was discovered to be very thin and additional work was performed to remove it and install new pavement of the proper thickness.

Item No. 19 – Cut PVC Pipe in Influent Manhole

Attached Correspondence:

BEC PCO #72
FTM No. 200

\$600.00 ---

An existing 18" PVC pipe protruded into the Influent Flow Metering Manhole which could negatively impact the flow readings, and was cut off to remove the obstruction.

Item No. 20 – Genset Auxiliary Power Feed

Attached Correspondence:

BEC PCO #66
FTMs No. 178; 198

\$7,620.00 ---

21 days

Additional conduit and wire was installed to provide auxiliary power to the new generator enclosure for power to miscellaneous electrical fixtures and control panel.

Item No. 21 – Replace Gas Handling Room Exhaust Fan Motor

Attached Correspondence:

BEC PCO #70
FTM No. 199

\$2,180.00 ---

2 days

Due to the classified environment of the Gas Handling Room, the exhaust fan required an explosion-proof motor and disconnect switch in lieu of the standard motor and disconnect originally required.

DESCRIPTION, PURPOSE & JUSTIFICATION OF CHANGE

ADD

DEDUCT

Item No. 22 – MT & Gas Skid PLC Communication Wiring

Attached Correspondence:

BEC PCO #77	\$2,280.00	---
FTMs No. 182-Revised; 201		

Additional conduit and wiring was required to allow communication of data from the Gas Skid Control Panel to PLC-8 to allow information on the co-gen system to be displayed on SCADA.

Item No. 23 – Rewire VFD for Grease Metering Pump

Attached Correspondence:

BEC PCO #78	\$1,050.00	---
FTMs No. 202		

The VFD in the grit building was rewired from the Grease Mixing Pump to the new Grease Metering Pump.

Item No. 24 – Replace CPT in Switchgear for Generator

Attached Correspondence:

BEC PCO #79	\$2,790.00	---
FTMs No. 203		

An existing control transformer at the existing switchgear was replaced due to its deteriorated condition.

Item No. 25 – Insulate Boiler Flue

Attached Correspondence:

BEC PCO #80	\$3,070.00	---
FTM No. 9; 204		

Additional work was required to insulate the boiler exhaust flue from the boiler up to the first floor ceiling.

Item No. 26 – Repack Joints in Gas handling Room

Attached Correspondence:

BEC PCO #76	\$2,620.00	---
FTM No. 205		

The existing digester pipe penetrations in the Gas Handling Room walls leaked excessively when the digester tanks were filled, and additional work was required to repack the joints to eliminate the leaking.

Total Additions and Deletions	\$108,540.00	\$1,860.00
	24 days	
TOTAL OF CHANGE ORDER NO. 2	\$106,680.00	
	24 days	